

ABSTRACT OF THE DISCLOSURE

An enclosed axle differential lock is provided which includes an axle carrier assembly within which is a bearing having a bearing cap. A differential housing rotates, supported by the bearing, with a pinion gear and a side gear each rotating in the differential housing and meshing together. An axle is driven by the side gear. A clutch may be used to lock the differential housing and the axle together. The clutch includes a first clutch element fixed to the differential housing and a second clutch element splined on the axle and axially movable thereon, the second clutch element having a first disengaged position in which the first clutch element and the second clutch element are substantially disconnected, and a second engaged position in which the first clutch element and the second clutch element are substantially drivingly connected. An actuator is integrally disposed in the bearing cap which urges the second clutch element from the first disengaged position to the second engaged position. The actuator may be pneumatic, hydraulic, or electronic.

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